ITD Information Technology Department

INFORMATION LINK

July 2002 | A source of information for our customers | Volume 102, Issue 3

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Enterprise Architecture is Underway! Get Involved!

Jennifer Witham

An invitation to participate in the Enterprise Architecture (EA) process was sent out to directors and IT lead coordinators in mid-June. The following domain teams are currently being formed: data and information integration, data storage, applications software, e-government, document management, office automation, platforms and operating systems, and security. The networking and video domains are incorporated into the Statewide Technology Access for Government and Education (STAGENet) process. If you are interested in joining a domain team or would like to find out more about the EA process, please contact me at jwitham@state.nd.us or (701)328-1999.

Throughout the month of July, domain teams will be meeting to define guiding principles, current state architecture, and to conduct an initial gap analysis between current and future state architectures. All domain team meetings will be posted on the ITD calendar at http://discovernd.com/itd/meet/meethome.html.

Top Issues Impacting the Records Management Profession

Bill Roach, CRM

The two dominant issues that will most impact Records Management in the next three years are:

1. The future and role of Records Management within the organization. There are no quick and easy answers for this one. The future role of records management will not be easily defined. It may be simpler to define what it will not be, than what it is today.

We desperately need to change our attitudes and actions or we risk being declared extinct. Many of our numbers continue to point out the growth in office paper as a clear indication that paper will be here for the long haul. Perhaps they are right. But consider this, what if the growth in office paper is not because of the office? I submit that a large percentage of the growth in paper is not from business but from individuals who sit at home each night with a PC and a printer. How much growth in paper records have you seen in your organization? I am not talking about the copies that people keep at their desks, but the records that you see entering your central records area or being stored as inactive records. Are they growing at 5, 10, even 20 percent per year? Seems like a lot.

Now check out the growth in electronic storage for your organization. Forget about the desktop and shared drives. Only look at your enterprise storage solution. Now divide the percentage of growth in half to account for a mirrored backup. What is the result? 50, 75, even 100 percent, without even considering all of the individual electronic records centers setting on the desktop. So tell me, which is a bigger problem for your organization?

This is not rocket science, find a solution for a big problem and you get your name in lights for a day. Barricade yourself in your fireproof vault and you will soon find that no one knows you're missing.

I only hope that records managers have the foresight to recognize that the only way for a real change to occur is if we are willing to make it. It is not up to "them" to see the light. It is up to us to grab one and go searching for solutions. We cannot afford to miss this opportunity.

2. Privacy.
The issue of privacy is going to continue to grow over time. We continue to develop new tools that can capture vast amounts of information about any electronic process or transaction. We also face challenges across the world that were unthinkable just a few short months ago. What information should be

publicly available? What about information that businesses collect? Are we restricting their ability to compete in a global market? If we are in government, can we use readily available information as a means to pay for needed programs and services? And isn't the expansion of data collection by law enforcement agencies around the world necessary to protect us from those who use technology to carry out terrorist or criminal activities? Is our failure to protect information responsible for the increase in identity theft?

In government, technology has redefined the open in open records. Open used to mean 9:00 AM to 5:00 PM at a government office some distance away. To access "open" records required taking time off from work, driving some distance, finding a place to park, standing in line, and searching endless rolls of microfilm. The bottom line is that the paper/film-based systems effectively limit access to those with a need to know. And what do we think of those who request open records for purposes other than need to know?

Granted, the records are defined as open, and we all subscribe to the premise that an informed citizen is better than an uninformed one. But just because a document is an open record does this mean that things like residential floor plans, divorce proceedings, agricultural loan information, and tax information should be posted for all to see?

And what about information owned by private companies? While the information may be about you, it belongs to the organization that created or collected it. Where do we draw the line? I believe we have only begun to realize how important the issue of privacy will become. It will be a difficult issue for years to come.

Network on the Prairie

North Dakota's statewide integrated data and video network unites rural areas and achieves economies of scale

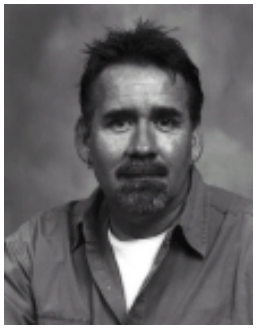
In 1999, the North Dakota State Legislature passed Senate Bill 2043 mandating construction of a statewide network that could carry integrated data and video communications, replacing an existing Frame Relay network the state used for data communications. It would also link rural school districts to centralized Internet services provided out of the cities of Fargo and Bismarck, saving thousands of dollars in individual access charges. The state funded its information technology (IT) department to build the network and a two-year project began to convert the existing installed base and add the K-12 and higher education communities.

An early step was to select a network vendor and supplier of ATM service. State IT officials found what they wanted in Cisco AVVID (Architecture for Voice, Video and Integrated Data), a set of specifications for merging voice, video, and data over an Internet Protocol (IP) network, in this case an ATM-based IP network. The state built the network with quality-of-service (QoS) capabilities that can simultaneously deliver multiple sessions of full-motion video to numerous state offices, educational institutions, and the state court system, with much-improved quality.

The network is based on 14 Cisco 7206 hub-strength routers, with an additional 500 Cisco 2600 Series routers and 500 Cisco Catalyst® 2900 Series and 3500 Series local-area network switches. Cisco AVVID partner Polycom of Milpitas, California, provides videoconferencing equipment. North Dakota uses a mix of Polycom iPower™ and ViewStation™ video equipment, depending on requirements at a given location. Different ViewStation models support videoconferencing applications ranging from smaller rooms and offices to large conference rooms. All of the Polycom terminals can directly connect to PCs, enabling collaborative videoconferences where participants can share documents. The iPower equipment has an embedded Windows PC, adding an even higher level of application collaboration. All the equipment supports H.323, the standard for videoconferencing over IP networks, and offers high-quality videoconferences at up to 30 frames per second.

Polycom software manages teleconference presentations, working with the Cisco switches. Cisco Multimedia Conference Manager registers the endpoints on the network and acts as a gatekeeper, communicating with the Cisco routers to ensure that designated video traffic receives the proper QoS priority over the ATM-based IP network. Cisco AVVID partners commit that their products meet the Cisco AVVID Partner program requirements for interoperability with Cisco products and technologies, thus the state was comfortable that the solution would work.

ITD EMPLOYEE PROFILE



Name: Mark Voss
Job Title: Program Analyst III
Section of ITD: Software Development
Job Responsibilities: Currently I am one of the lead analysts for the federally mandated Health Insurance Portability and Accountability Act Project (HIPAA). Duties include meeting with users to gather requirements for the different areas of the Medicaid Management Information System (MMIS) and creating Design Specifications to be coded by a Development team to achieve HIPAA compliancy.
Years at ITD: 9

Bountiful Benefits

For a state like North Dakota, with a population scattered across great distances, an integrated data and video network delivers many benefits, as its school districts, courts and local governments are already finding out. A judge, instead of driving two hours to reach a neighboring county courthouse, can arraign a defendant from his local courtroom. A sick prisoner in the Bismarck State Penitentiary can receive medical attention through a live videoconference with doctors in a hospital across the city. And school districts can pipe in full-motion educational programs and gain low-cost access to the Internet through the statewide hook-up.

"Without the state network, each school district would have to arrange its own Internet access and individual services," says Glen Rutherford, Network Architect of the Information Technology Department. In many cases, that would mean separately managed networks and extreme variation in access charges across North Dakota's rural areas.

Business Impact

- *Met state regulations resulting in reimbursement of 63% of network costs*
- *Eliminated leased line costs for video network of $15,000 per month by migrating to an IP network*
- *Deployed video communications across educational, judicial, and governmental institutions reducing operating costs*

All in all, 500 schools, courthouses, colleges, universities, and local government entities are connected through the network. Linking the K-12 schools carries an extra bonus: it means the state is eligible for an E-Rate federal reimbursement of 63 percent of the $5.6 million cost of the network.

Building on Potential

While many benefits have already manifested, the full potential of the network is only starting to be realized, state officials say. The network will eventually replace the state's existing 10-year-old Interactive Video Network (IVN). The IVN is a point-to-point, leased line T1 network that is used an average of 10 hours a day, six days a week for roughly 20 college, university, and state office locations that are not yet served by the H.323/ATM-based IP network.

"By eliminating that leased line network, we're going to save significant dollars, about $15,000 per month," Rutherford says.

Even while expenses go down, quality will go up, because the new network supports QoS through Cisco's implementation of IP Precedence. H.323 requires QoS for reliable and clear video. If QoS is not supported, it can result in jerky video that turns off students raised on MTV, video games, and high-quality motion pictures. "I'd rather have no video in the classroom than unreliable video," says Duane Hartze, H.323 network analyst for Information Technology Department. "The attention span is just not there for bad video."

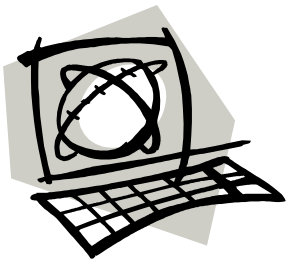
One of the state's early uses of video over the new network was high profile. Last January, a Spanish class in Alexander, in the northwestern part of the state, interacted with Governor John Hoeven during the State of the State address, the first time he used the state's video network to deliver his address. Live, interactive video feeds also went to the University of North Dakota football team at Grand Forks in the northeast, a business in Wahpeton in the southeast, and Phoenix International, a technology firm in Fargo in the east, Hartze says.

Other offices using video include the research extension offices with the North Dakota State University. Extension agents gain knowledge on diseased crops and receive training in handling agricultural chemicals, while office managers use the network for live, monthly meetings, Rutherford says.

The network also provides added value in training for state employees and more instructional sessions available to K-12 schools and institutions in the state's higher education system, Hartze says. Nurses' training, for example, can now be enhanced with video instruction piped into the classroom, perhaps including scenes from an operating room or emergency room. "To Governor Hoeven, the network means people don't have to leave the rural areas to get a good education or be in touch with the rest of the world," Hartze notes.

The citizens of North Dakota will not just be in touch with the rest of the world, but will experience the world via fast, efficient, and integrated data and video communications as a result of the Cisco/Polycom relationship.

Reprinted with permission from Cisco Systems.



Upcoming Event: Web Design for Accessibility and Usability

Dennis Klipfel

E-Team members of the ITD Applications Development section will be hosting an information-sharing program on Wednesday, August 14, 2002 at 1:00 pm. This program will feature the exchange of tips and techniques in development of accessible web sites and pages. All agency coordinators and web developers are encouraged to attend.

In conjunction with this program the Accessibility Expo from the Interagency Program for Assistive Technology (IPAT) will also be on display. This Expo features three areas of assistive technologies available to individuals with disabilities: adapted living and/or environmental control, augmentative communication, and adaptive computer access.

At the time of this article the specific location had not been finalized. An official program notice will be issued about mid July. Meeting information will also be posted on the ITD meetings web page at http://discovernd.com/itd/meet/meethome.html.

Enterprise Groupware Technology

Gary J. Vetter

On June 13, 2001, the IT Standards & Policy Group split its Office Automation standard (STD006-98) in order to create a new and separate standard for Groupware (STD011-01). At that time, eight technologies were introduced with standards "to be determined." They include Desktop Faxing, Unified Messaging, Instant Messaging, Presence Information, Chat Services, Data Conferencing, Audio-Video Conferencing, and Workflow-tracking/Knowledge Management. As stated in the new standard, "the benefits of these applications extend beyond the boundaries of any one agency. Groupware must be deployed in a way that makes sense for everyone within ND State Government. Therefore, the direction of groupware is towards a highly reliable, standardized enterprise system."

When this standard was created, many of the technologies needed time to mature into business-class applications with widespread popularity. Therefore, the intent was to communicate the need for a standardized deployment without necessarily defining the standard itself. Instead, a blanket standard was created stating that "agencies should consult with ITD prior to any major upgrade or deployment of these technologies."

Since that time, an initiative has been added to ITD's 2002 Business Plan to create a whitepaper that describes the concept of Instant Messaging and its relevance to ND State Government. Its purpose is to provide insight for both technical and executive audiences, to identify critical business decisions to be made, and to offer recommendations for the future deployment of the technology.

Once the study began, it became apparent that most mature enterprise Instant Messaging solutions today also include components for Presence Information, Chat Services, Data Conferencing, and Audio-Video Conferencing. Although the scope of our initiative has broadened, it is exciting to find that a single vendor solution may be able to address several of our groupware technology needs.

ITD hopes to finish the whitepaper later this summer. At that time, the findings will be introduced to the Enterprise Architecture's Office Automation team. Through due process, a plan will be developed for deploying the technology across the enterprise.

If your agency is considering deploying any of the technologies described in this article, please remember that those efforts need to be coordinated with ITD. Please contact Gary J. Vetter at (701)328-4316 or gvetter@state.nd.us with any comments or questions.

J2EE Training

Vern Welder

ITD Software Development has selected J2EE (Java Version 2 Enterprise Edition) as our standard for web application development. CapStone Consulting Inc. will train our development staff in J2EE development.

CapStone takes a boot camp approach to training. Developers will attend a training session in a specific area of J2EE development followed by a mentoring session where they apply their training on a software development project. Six different classes/mentoring sessions are required to complete the training.

J2EE development uses a different methodology than we are accustom to using. The planning and analysis phases are done similar to our current process, although the analysis output is different. The biggest difference in this methodology is that design and development occur iteratively. The developer designs/programs a working version of the system or a system process and presents it to the customer who then identifies changes needed. Then the developer starts the design/program phase again to make the changes which are again presented to the customer. The iterative cycle continues until the customer is satisfied that requirements are met.

J2EE training will occur in the June through August timeframe. By September we'll have 26 developers trained to develop J2EE applications.

Lotus Notes/WebSphere Development Combined

Vern Welder

IBM's direction is to combine Lotus Notes and WebSphere application development into one web development tool called WebSphere Developers Studio. Lotus Notes will provide collaboration services such as calendars, scheduling, e-mail, and messaging. WebSphere will provide transaction processing services. This is a strategic move that gives developers the ability to create a web page that can do collaboration processes and update data simultaneously. Applications developed with WebSphere Developers Studio are J2EE compatible. Web Services are used to integrate Lotus Notes, WebSphere, and Microsoft .Net applications.

The Lotus Notes Domino development environment as we know it will be supported for maintaining existing applications and for developing new collaboration web services.

Innovative Technology Forum

Dennis Klipfel

An Innovative Technology Forum was held in the North Dakota Heritage Center auditorium on June 13, 2002, featuring a seven-member panel discussing government continuity and interagency data sharing initiatives.

The Innovative Technology Forum (ITF) was organized and hosted by the IT Planning Division of ITD. It is offered as a means of addressing enterprise issues or hot topics and to provide agency administrators/directors/CEOs and IT coordinators a current picture, status update, and/or direction of specific issues or topics. ITF programs are planned to be held periodically.

As of 9-11, business continuity and the effective communication of priority information have become of much greater importance in both private and public business activities.

This first forum presented and discussed areas affecting government continuity and the need for interagency data sharing. Serving as the panel moderator was Nancy Walz, ITD. Doug Friez, North Dakota Homeland Security Coordinator, who spoke on the importance of business continuity and data sharing initiatives, started the program. Other members of the panel and topics discussed include:

- Health Alert Network – What is it and who need be involved?
  Tim Wiedrich, Division of Emergency Health - ND Department of Health
- Criminal Justice Information Sharing Initiatives
  Jerry Kemmet, Bureau of Criminal Investigation
- North Dakota GIS Hub: Status & Vision
  Bob Nutsch, Information Technology Department
- Continuity of Government/Availability of EOC
  Harold Narum, Division of Emergency Management
- Limiting the Risk through Contingency Planning
  Jo Zschomler, Risk Management Division
- Disaster Recovery Strategies: Hot Sites. Dual Sites.
  Larry Lee, Information Technology Department

The program was videotaped and can be viewed on the ITD Planning web site. Access to the program is in the planning research section at http://discovernd.com/itd/planning/research/.

North Dakota E-government Survey

ITD and Legislative Council recently funded a study of Internet use and public opinion about e-government. Citizens and businesses were surveyed on a number of issues and the results were compiled. The full reports with the survey results are available under the ITD planning research section at http://discovernd.com/itd/planning/research/.

Some preliminary findings from the citizen survey include the following:

- 74% of the citizens sampled currently use computers.
- 70% of the citizens sampled currently use the Internet.
- The most likely Internet services residents would consider using included driver license renewals, communicating with state legislators or government officials, accessing educational programs, using directories of government services, filing taxes, obtaining parking or camping reservations, voting and checking credentials of a regulated business.

Some preliminary findings from the business survey include the following:

- 87% of the companies currently use computer applications.
- 80% are connected to the Internet and 46% use wireless technologies.
- Of these companies, 59% use computer applications to manage its operations regularly and use the Internet moderately or extensively.
- 72% report using dial-up modems to connect to the Internet. Of these companies, 80% indicated that high-speed access was available to them.
- 21% use cable modems or wireless or satellite Internet connections.
- 68% report having a choice of Internet service providers.
- The majority of companies (67%) are satisfied with their Internet connection speed.
- 58% report having an Internet website, with another 6% planning to develop a site in the next year.

May 2002 Antivirus Statistics

Sean Wiese

Below is a summary of viruses detected and cleaned from e-mail attachments that were attempted to be distributed through the e-mail system(s). These viruses were detected at three points in the e-mail network:

1) On the incoming Internet E-mail Gateway(s).
2) On the ITD Exchange Server.
3) On the ITD Notes Server.

ITD Notes Server Total	0
ITD Exchange Server Total	0
ITD Internet Gateway #1 Total	9,772
ITD Internet Gateway #2 Total	9,651
Report Total	19,423

If you have any questions, please contact me at (701)328-1985 or swiese@state.nd.us.

INFORMATION LINK is published quarterly by the North Dakota Information Technology Department. Contact the editor if you are interested in contributing information or would like to be added to the mailing list.

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